

finely denticulated near the end ;” so that it appears to be the same as the species, described by Pliny and figured by Camper, that we have in the Thames, and which I described under the name of *Phocæna tuberculifera*. In the last edition of the ‘Catalogue’ (p. 402) I stated that the species without the spines on the dorsal fin appears to be very rare ; and it is doubtful if it is a distinct form, and if my name will not have to sink into a synonym.

*The Stuffed Whale in the Swedish Museum.*

In reply to my inquiry, Professor Lilljeborg observes, “Vous m’avez prié de vous instruire de la méthode au moyen de laquelle la Balænoptère du M. Malm a été conservée. La peau de la même a été divisée en plusieurs morceaux, et a été depuis étendue sur un modèle de bois exactement de la même forme et grandeur que de l’animal lui-même. L’épiderme est conservé sur la peau, et il est pourtant très-peu lésé. La couche graisseuse de la peau a sans doute été très-menue, autrement l’épiderme en se desséchant aurait été plus plein de fentes et de rides qu’il ne présente maintenant.”—J. E. GRAY.

*Observations on the Reproduction of the Cecidomyidæ.*

By F. MEINERT.

In an article “On the Origin of the Germs in the Larvæ of *Miastor*” (Naturhist. Tidsskr. ser. 3. vol. iii.) I maintain, in opposition to the opinion of M. Pagenstecher, that the germs of the larvæ originate in the adipose tissue. In another paper, entitled “A few more words on *Miastor*,” after some remarks upon the formation of germs in another Cecidomyide larva, and on the formation and development of the ovum in animals in general, I more particularly indicate the relations of the germs to the adipose tissue. Here it must be remarked that we have to do with two different forms, species of two genera differing widely from each other, which have been the subjects of investigations made by different authors. I have been fortunate enough to be able to examine both forms ; and as I was the first to classify the Cecidomyide examined by M. Wagner (*Miastor*), I have also succeeded in rearing the perfect insect from the larva referred to by MM. Pagenstecher and Leuckart, to which I give the following name and diagnosis :—

OLIGARCES. Haustellum nullum ; palpi nulli. Tarsi 2-articulati. Antennæ moniliformes, 11-articulatæ. Alæ costis binis vel ternis abbreviatis, evanescentibus.

*O. paradoxus*. Ochraceus, capite atque mesonoto nigrescentibus. Femina : antennæ corpore quadruplo breviores. Ovipositor brevissimus. Long. 1.25–1.5 millim. Larva habitat sub cortice populi gregatim.

The cells which become developed into ova and germs, are usually in connexion with the adipose tissue, of which they form part ; but whilst this union persists for a certain time in *Miastor* (Wagner’s

larva), these cells, on the contrary, separate speedily to a certain extent from the adipose tissue in *Oligarces* (the larva of Pagenstecher and Leuckart), although they do not, as Leuckart maintains, constitute a true ovary either in *Miastor* or in *Oligarces*. In fact, all the cells become developed into ova and larvæ, and none of them serves for the formation of the stroma, for the formation of the envelopes of the ova, or for any other analogous purpose.

In order to explain the peculiarities of these animals, I have endeavoured to establish a theory of the formation and development of the ova in the whole animal kingdom, of which the following is an abridgemnt.

The ovum is composed either of a single cell, "the germinal cell," or of the germinal cell accompanied by several other "vitelline cells," or by the secretion of the latter, "the vitelline mass." The ovum of the Mammalia, and that of most of the inferior animals, belongs to the first category; that of other animals, and especially that of Birds, belongs to the second; and that of most Insects to the third kind. The "germinal cell" alone, the nucleus of which is the "germinal vesicle," is subject to the vitelline segmentation which is so often discussed. The "vitelline cells" and the "vitelline mass" are not segmented, but pass, without any other form of development, into the nutritive vitellus. The germinal cell divides by segmentation into minute cells (embryonal cells). A portion of these, not absorbed by the formation of the embryo, furnish material for the new ovaries and testes, inasmuch as in general some of the cells form a stroma which separates and encloses a greater or smaller quantity of the other cells. The remaining non-separated cells form, in Insects, what is called the adipose tissue.

A second element, the semen, is necessary in most animals, to enable the ovum, or rather the germinal cell of the ovum, to develop itself; but this stimulus is not always necessary in a great number of the inferior animals. The development of the ovum without stimulus or fecundation is by no means dependent upon a certain more or less advanced point of development of the maternal animal, or of its ovary; for sometimes the maternal animal attains a complete development even with external and internal genital characters (parthenogenesis, as in the bee), sometimes it propagates only in the state of a larva without genital characters, and this may be repeated through several generations, either under the same larval form (as in our Cecidomyides) or under a different exterior form (alternate generations or metagenesis—Trematoda). I by no means assume that there is any well-marked limit between parthenogenesis and metagenesis; for example, the mode of reproduction in the Aphides might be explained in both ways.

As compared with other insects, I also regard it as characteristic that, whilst in general we must make a distinction between the epithelial and vitelline cells, and the latter serve only for the nourishment of the embryo, in the present case the epithelial cells serve at once as epithelium and as vitelline cells to these larvæ.

I have thus given a summary of the principal results of my investigations, and shall only add that in the first part of my last treatise I have endeavoured to maintain my diagnosis of *Miastor* in opposition to Schiner, Siebold, and Loew. Whatever might appear to be remarkable in the fact that *Miastor* had only four joints in the tarsi and two joints in the palpi, vanishes before the circumstance that *Oligarces* has only two joints in the tarsi, and possesses no palpi at all.—*Ann. Sci. Nat.* sér. 5. tome vi. pp. 16–18.

*A Last Remark on the Generic Name Potamogale.*

By Dr. A. GÜNTHER.

Dr. Gray, in a note "On the Use of the Genus *Potamogale*," published in the preceding Number of this Journal, p. 426, refers to the following remark, in which I had expressed my view on the same subject:—"Since he [Dr. Gray] has adopted the specific name of *velox*, given by Du Chaillu at the same time [as *Potamogale*], and as in this case the generic and specific names refer to the same individual specimen, succeeding naturalists have no other choice but to recognize or to reject both alike" (*Zool. Record*, ii. p. 33). He states that "the latter observation is incorrect," and "that the generic name of *Potamogale* and the specific one of *velox* do not rest on the same basis."

By this time all zoologists interested in the subject must be so fully acquainted with the history of this case, that the matter might have been safely left where it stands; however, as Dr. Gray says that I had come to this conclusion "on a very imperfect recollection of his paper," I must add a few words in further explanation.

In questions of this kind I am guided by a rule which is adopted by the majority of naturalists, viz. that "a name which has never been clearly defined in some published work should be changed for the earliest name by which the object shall have been so defined." Accordingly I asked myself, would it have been possible for a zoologist like Dr. Bocage or Prof. Allman to recognize *Potamogale* from Du Chaillu's original description, if the typical specimen (a mutilated skin, without skull) had been lost. I thought, and am still inclined to think, that identification would have been, for these zoologists, impossible or at least a matter of uncertainty, and therefore, that the first binomial name given by one of them should have superseded that proposed by Du Chaillu. In this respect I am so fortunate as to agree with Dr. Gray when he says, "M. du Chaillu's description of the *Cynogale velox* is so incorrect that, if the skin had not fortunately come into the possession of the British Museum, the animal must have remained . . . one of the puzzles of zoologists" (*this Journal*, 1865, xvi. p. 426). For this reason I was and am still of opinion that both names might have been rejected alike, and that a new *binomial* name given by Dr. Gray would have been upheld by all naturalists adhering to the rule quoted above.

But in his last note Dr. Gray states, "The animal is described in